REMARKS

Introductory Comments:

Claims 1-8, 11-17 and 20-27 were examined in the Office Action dated 10 April 2002. Applicant notes with appreciation that the following rejections have been withdrawn: **(a)** the rejection of claims 1, 12-14 and 24-27 under 35 U.S.C. §102(a) as unpatentable over A-Mohammadi et al. (1998) *Gene Therapy* 5:76-84 ("Mohammadi"); **(b)** the rejection of claims 1-4, 6-8, 11-17 and 20-23 under 35 U.S.C. §112, first paragraph; **(c)** the rejection of claims 1, 5, 6, 13-15, and 21-22 under 35 U.S.C. §112, second paragraph; **(d)** the rejection of claims 1-4, 7-8, 11-12, 15-17, 20, 23 and 25 under 35 U.S.C. §102(e) as unpatentable over U.S. Patent No. 6,194,389 to Johnston et al. ("Johnston"); **(e)** the rejection of claims 1, 13-15, and 21-22 are rejected under 35 U.S.C. §103(a) as unpatentable over Johnston in view of Mohammadi or Hofmann et al. (1996) *Proc. Natl. Acad. Sci.* 93:5185-5190 ("Hofmann"); and **(f)** the rejection of claims 1 and 5 are rejected under 35 U.S.C. §103(a) as unpatentable over Laube et al. (1994) *Human Gene Therapy* 5:853-862 ("Laube") in view of Mohammadi or Hofmann.

However, the following claim rejections were maintained: **(1)** claims 1, 12-14 and 24-27 remain rejected under 35 U.S.C. §102(b) as unpatentable over Hofmann; and **(2)** claims 24-27 remain rejected under 35 U.S.C. §102(e) as unpatentable over U.S. Patent No. 6,200,751 to Gu et al. ("Gu").

In addition, the following new claim rejections have been entered: **(3)** claim 7 now stands rejected under 35 U.S.C. §102(b) as unpatentable over Hofmann (claim 7 has been added to claim rejection **(1)**, above); **(4)** claim 3 stands rejected under 35 U.S.C. §112, first paragraph, as nonenabled; **(5)** claims 2-8, 11-14 and 27 stand rejected under 35 U.S.C. §112, second paragraph, as indefinite; **(6)** claims 1-4, 7-8, 11-12, 15-17, 20, 23 and 25-27 stand rejected under 35 U.S.C. §102(e) as unpatentable over Johnston in view of Miwa et al. (1987) *Mol. Cell. Biol.* 7:2803-2813 ("Miwa"); **(7)** claims 1, 12 and 24-27

stand rejected under 35 U.S.C. §102(b) as unpatentable over Burns et al. (1993) *Blood* 81:1558-1566 ("Burns") or Deb et al. (1992) *J. Virology* 66:6164-6170 ("Deb"); **(8)** claims 1 and 5 stand rejected under 35 U.S.C. §102(b) as unpatentable over Laube; **(9)** claims 1-4, 7-8, 11-17, 20-23 and 25-27 stand rejected under 35 U.S.C. §102(b) as unpatentable over Fynan et al. (1993) *Proc. Natl. Acad. Sci. USA* 90:11478-11482 ("Fynan"); **(10)** claims 1-3, 7, 12-14 and 25-27 stand rejected under 35 U.S.C. §102(e) as unpatentable over U.S. Patent No. 5,891,718 to Hobart et al. ("Hobart"); and **(11)** claims 1-4, 7-8, 11, 15-17 and 20-23 stand rejected under 35 U.S.C. §103(a) as unpatentable over Hobart in view of Johnston.

All standing rejections are respectfully traversed for the reasons discussed herein below.

Overview of the Amendments:

Applicant, by way of this Amendment, has provided minor amendments to claims 2-8, 11-14 and 27. More particularly, all of the listed claims have been amended to replace "A" with "The" in the preamble of each claim. In addition, claim 6 was amended to correct its dependency to claim 5, the result of an obvious inadvertent typographical error. Finally, claim 3 was amended to remove the term "orally" from the claim. Support for the amendments can thus be found throughout the specification and in the claims as originally filed. Accordingly, no new matter has been added by way of these claim amendments, and the entry thereof is respectfully requested.

The Rejection under 35 U.S.C. §112, first paragraph:

Claim 3 stands rejected under 35 U.S.C. §112, first paragraph, as nonenabled. This is a new ground of rejection. In particular, the Office acknowledges that applicant's specification is enabling for methods expressing antigens of interest using a minimal promoter sequence, wherein the nucleic acid construct is administered using injection,

intradermal particle delivery, inhalation, topically, intranasal or transmucosal administration. However, the Office asserts that the specification "does not reasonably provide enablement for the same method wherein the construct is delivered directly to the subject orally." Office Action at page 8.

In response, applicant draws the Office's attention to the amendment to claim 3 wherein the term "orally" has been removed from the claim, thereby obviating the rejection. Reconsideration and withdrawal of the rejection of claim 3 under 35 U.S.C. §112, first paragraph, is thus respectfully requested..

The Rejection under 35 U.S.C. §112, second paragraph:

Claims 2-8, 11-14 and 27 stand rejected under 35 U.S.C. §112, second paragraph, as indefinite. This is a new ground of rejection. Initially, the Office has objected that use of the article "A" in claims 2-8, 11-14 and 27 renders the claims indefinite, and suggests that "A" should be replaced with "The" to obviate the rejection.

In response, applicant draws the Office's attention to the amendments to the claims wherein all occurrences of "A" have been replaced with "The." Accordingly, the rejection of claims 2-8, 11-14 and 27 under 35 U.S.C. §112, second paragraph, has been obviated. Reconsideration and withdrawal of the rejection is thus respectfully requested.

The Office has also objected to claim 6 on the basis that it was dependent upon itself. Applicant thanks the Office for pointing out this obvious typographical error, and have amended claim 6 to now properly depend from claim 5. Reconsideration and withdrawal of the rejection of claim 6 under 35 U.S.C. §112, second paragraph, is thus respectfully requested.

The Rejections under 35 U.S.C. §102:

Claims 1, 7, 12-14 and 24-27 stand rejected under 35 U.S.C. 102(b) as anticipated by Hofmann. This is a new ground of rejection for claim 7 only. In particular,

the Office asserts that Hofmann describes "a recombinant retroviral vector construct (SIN-RetroTet vector) containing an autoregulatory cassette comprising a heptamerized tet operator sequence fused to the human CMV immediate early minimal promoter $P_{hCMV*-1}$ (reciting Figure 1)." The Office asserts "the human CMV immediate early minimal promoter $P_{hCMV*-1}$ falls within the scope of a functional variant [and] the disclosure of Hoffman fulfills the required elements of the claims" Office Action at page 3. The Office thus concludes that the claims are anticipated by the reference. Applicant respectfully traverses.

Anticipation of a claim under §102 *requires* that each and every element of the claims be inherent in, or disclosed expressly by the anticipating reference. *Constant v. Advanced Micro-Devices, Inc.*, 7 USPQ2d 1057, 1064 (Fed. Cir. 1988). Exclusion of a single claimed element from a prior art reference is enough to negate anticipation by that reference. *Atlas Powder Co. v E.I. du Pont De Nemours & Co.* 224 USPQ 409, 411 (Fed. Cir. 1984). Further, anticipation basically requires identity with the prior art document *(Tyler Refrigeration v. Kysor Indus. Corp.*, 227 USPQ 845 (Fed. Cir. 1985)), where the identical invention must be shown in as complete detail as is contained in the rejected claim (*Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913 (Fed. Cir. 1989)). Finally, in order to anticipate, a prior art reference must be enabling, thus placing the allegedly disclosed matter in the possession of the public. *Akzo N.V. v. United States ITC*, 1 USPQ2d 1241 (Fed. Cir. 1986).

All of applicant's claims include the express limitation that a minimal promoter sequence is used to drive expression of the attached antigen sequence. The term "minimal promoter" is clearly and unambiguously defined in the specification as only encompassing those promoters where the native enhancer sequence has been excised or otherwise removed. Accordingly, in order for Hofmann to anticipate, the $P_{hCMV*-1}$ promoter described therein must have had all native enhancer sequences excised or otherwise removed. Hofmann clearly fails to teach such promoters. There is nothing whatsoever

within the four corners of Hofmann that even comes close to describing applicant's minimal promoters.

The Office seeks to overcome this basic failing in the Hofmann article by arguing that the $P_{hCMV*-1}$ promoter is a "functional variant" of a minimal promoter, providing no supporting evidence whatsoever to back up the argument. Accordingly, the Office seems to be arguing that the $P_{hCMV*-1}$ may be a variant similar to a minimal promoter under some theory of inherency. However, the Office's rejection also fails even under its theory of inherency. The fact that a certain characteristic *may* have occurred in the prior art is not sufficient to establish the inherency of that characteristic. *In re Rijckaert,* 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). In fact, to establish inherency, the evidence must make clear that the missing descriptive matter (in this case, the excision of native enhancer sequences from the $P_{hCMV*-1}$ promoter) is *necessarily* present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill in the art. *In re Robertson*, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). The Office has not established this feature, and the rejection must therefore fail.

For all of the foregoing reasons, then, the rejection of claims 1, 7, 12-14 and 25-27 under 35 U.S.C. §102(b) over Hofmann is improper and not based upon any proper evidence of record in the instant case. Reconsideration and withdrawal of the rejection is thus earnestly solicited.

Claims 24-27 remain rejected under 35 U.S.C. §102(e) as anticipated by Gu. In particular, the Office asserts that "Gu disclosed the isolation and use of the minimal promoter of the endothelial cell protein C binding protein, EPCR, operably linked to a gene coding for a protein of interest," and then concludes that GU's promoter meets the limitation of applicant's recited "minimal promoter." Office Action at page 6. The Office goes on to assert that the constitutive transcription control element found at -200 to -177 of the promoter "is not an enhancer [as] the region is merely required for an endothelial cell specific expression." Office Action at page 6. The Office also asserts that applicant's use

of the open language "comprising" in the claims read on molecules containing promoters with their native enhancers. Office Action at page 7. The Office thus concludes that Gu anticipates applicant's claims. Applicant respectfully traverses.

As discussed above, anticipation of a claim under §102 *requires* that each and every element of the claims be inherent in, or disclosed expressly by the anticipating reference. In addition, a prior art reference must be enabling in order to anticipate, thus placing the allegedly disclosed matter in the possession of the publicAll of applicant's claims include the express limitation that a minimal promoter sequence is used to drive expression of the attached antigen sequence. The term "minimal promoter" is clearly and unambiguously defined in the specification as only encompassing those promoters where the native enhancer sequence has been excised or otherwise removed. Accordingly, contrary to the Office's assertions, the minimal promoters recited in the claims must have the native enhancer sequence excised or otherwise removed, and the use of open-ended ("comprising") language does not allow for the re-inclusion of the enhancer.

Accordingly, in order for Gu to anticipate, the promoters described therein must have had all native enhancer sequences excised or otherwise removed. Gu clearly fails to teach such promoters. There are two promoter sequences described in the Gu article, a promoter sequence spanning from -350 to -1 of the mouse EPCR promoter, and a promoter sequence spanning from -1080 to -1 of the mouse EPCR promoter. See Gu, Example 3. Neither of these promoters (sequences of 350 and 1080 nucleotides, respectively) appears to be a minimal promoter since these promoters would be expected to have retained normal enhancer sites. In addition, Gu describes deletion of a sequence corresponding to -280 to -160 from a mouse EPCR promoter sequence. However, as the Office has pointed out, this is not an enhancer sequence, as "it is merely required for endothelial cell specific expression." Office Action at page 6. Accordingly, Gu clearly fails to teach applicant's recited promoters. There is nothing whatsoever within the four corners of Gu that even comes close to describing applicant's minimal promoters. In addition, there

is nothing inherently in the Gu disclosure that teaches or describes applicant's minimal promoters since the mere fact that a certain characteristic *may* have occurred in the prior art is not sufficient to establish the inherency of that characteristic. *In re Rijckaert,* 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). In fact, for the Office to establish inherency over Gu, it must identify evidence that makes it clear that the missing descriptive matter (in this case, the excision of native enhancer sequences from Gu's promoter) is *necessarily* present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill in the art. *In re Robertson,* 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). The Office has not established this feature, and the rejection must therefore fail.

For all of the foregoing reasons, then, the rejection of claims 24-27 under 35 U.S.C. §102(e) over Gu is improper and not based upon any proper evidence of record in the instant case. Reconsideration and withdrawal of the rejection is thus earnestly solicited.

Claims 1-4, 7-8, 11-12, 15-17, 20, 23 and 25-27 stand rejected under 35 U.S.C. §102(e) as unpatentable over Johnston in view of Miwa. The Office asserts that applicant's claims are directed to method that entail transfecting cells with a construct "comprising a minimal promoter sequence," and that Johnston discloses that "regulatory sequences which may be used to provide transcriptional control of the gene ... are generally promoters ... and that other regulatory sequences which may optionally be incorporated into the polynucleic acid sequence include enhancers, termination sequences." Office Action at page 12. The Office goes on to note that Johnston exemplifies promotes such as those described by Miwa et al., and then asserts that Miwa "teach a promoter region of the human alpha-cardiac actin gene that lacks an enhancer element, [citing the Miwa abstract]." Office Action at page 13. The Office then concludes that Johnston meets all the limitations of the claims. Applicant respectfully disagrees.

As discussed above, anticipation of a claim under §102 *requires* that each and every element of the claims be inherent in, or disclosed expressly by the anticipating reference. In addition, a prior art reference must be enabling in order to anticipate, thus

placing the allegedly disclosed matter in the possession of the public. All of applicant's claims include the express limitation that a minimal promoter sequence is used to drive expression of the attached antigen sequence. The term "minimal promoter" is clearly and unambiguously defined in the specification as only encompassing those promoters where the native enhancer sequence has been excised or otherwise removed. Accordingly, contrary to the Office's assertions, the minimal promoters recited in the claims must have the native enhancer sequence excised or otherwise removed, and the use of open-ended ("comprising") language does not allow for the re-inclusion of the native enhancer in the expression construct.

Accordingly, in order for Johnston to anticipate, the promoters described therein must have had all native enhancer sequences excised or otherwise removed. Johnston, both alone and in combination with Miwa clearly fails to teach such promoters. More particularly, the Office has pointed to a passage in Johnston that discusses optional regulatory elements (including enhancers) but this passage does not relate to the portions of the specification that are specific to promoters, rather the passage just mentions generic regulatory elements in passing. There is no evidence of record in the case that Johnston was referring to native enhancers optionally added to specific promoters. The skilled artisan understands that there are numerous enhancer sequences native to, for example, a specific coding sequence (and not a specific promoter) that will enhance expression. Accordingly, Johnston fails to teach applicant's recited promoters. There is nothing whatsoever within the four corners of Johnston that even comes close to describing applicant's minimal promoters.

In addition, there is nothing inherently in the Johnston disclosure that teaches or describes applicant's minimal promoters since the mere fact that a certain characteristic *may* have occurred in the prior art is not sufficient to establish the inherency of that characteristic. *In re Rijckaert*, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). In fact, for the Office to establish inherency over Johnston, it must identify evidence that makes it clear that

the missing descriptive matter (in this case, the excision of native enhancer sequences from Johnston's promoter) is *necessarily* present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill in the art. *In re Robertson*, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). The Office has not established this feature, and the rejection must therefore fail.

With regard to the Miwa abstract recited by the Office, applicant notes that Miwa mentions that certain insertion or deletion mutants were made to the promoters. Applicant's recited minimal promoters require that the native enhancer is excised from the promoter. An insertion mutant as described by Miwa clearly does not fit this description. Accordingly, the inclusion of Miwa's mutant promoters to the Johnston adds nothing to the rejection.

For all of the foregoing reasons, then, the rejection of claims 1-4, 7-8, 11-12, 15-17, 20, 23 and 25-27 under 35 U.S.C. §102(e) over Johnston is improper and not based upon any proper evidence of record in the instant case. Reconsideration and withdrawal of the rejection is thus earnestly solicited.

Claims 1, 12 and 24-27 stand rejected under 35 U.S.C. §102(b) as unpatentable over Burns or Deb. The Office asserts "Burns teach preparation of a ... plasmid comprising a minimal HLA A2 promoter having CCAAT and TATA box motifs operably linked to a CAT gene," and that "Deb disclose a plasmid comprising a minimal human proliferating cell antigen (PCNA) promoter with a TATA box alone operably linked to a CAT gene," and then concludes that Burns and Deb "anticipate the claims." Applicant respectfully disagrees.

As discussed above, anticipation of a claim under §102 *requires* that each and every element of the claims be inherent in, or disclosed expressly by the anticipating reference. In addition, a prior art reference must be enabling in order to anticipate, thus placing the allegedly disclosed matter in the possession of the public.

All of applicant's claims include the express limitation that a minimal promoter sequence is used to drive expression of the attached antigen sequence. The term "minimal

promoter" is clearly and unambiguously defined in the specification as only encompassing those promoters where the native enhancer sequence has been excised or otherwise removed. Accordingly, contrary to the Office's assertions, the minimal promoters recited in the claims must have the native enhancer sequence excised or otherwise removed, and the use of open-ended ("comprising") language does not allow for the re-inclusion of the native enhancer in the expression construct.

Burns et al. describe a series of studies where the transactivation of the HLA A2 promoter by HCMV IE gene products was found to occur with all of the various promoter constructs (see Figure 1 of Burns). The authors conclude that the dual CCAAT boxes found in the -116 to -1 promoter sequence (pHLA A2-CAT 116) serve as native enhancer sequences to the HLA A2 promoter. Accordingly, Burns fails to describe applicant's recited minimal promoters.

Deb et al. describe a series of studies where the ability of p53 to activate cell proliferation. As such, the authors generated a PCNA promoter containing sequences spanning -269 to -1 of the promoter sequence (see Deb, page 6166, right column) and two other, undefined promoters. All three promoters were transactivated by p53, indicating only that there were p53 reactive sites present in all three promoters tested, and these sites were allowed for enhanced expression in the presence of p53. However, it is certainly unclear if the various PCNA promoters discussed by Deb were indeed "minimal promoters," that is promoters where all native enhancer sequences had been removed as required by the claims. There is thus nothing expressly stated by Deb, and there is nothing inherently in the Deb disclosure that teaches or describes applicant's minimal promoters since the mere fact that a certain characteristic *may* have occurred in the prior art is not sufficient to establish the inherency of that characteristic. *In re Rijckaert*, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). In fact, for the Office to establish inherency over Deb, it must identify evidence that makes it clear that the missing descriptive matter (in this case, the excision of native enhancer sequences from Deb's promoter) is *necessarily* present in the

thing described in the reference, and that it would be so recognized by persons of ordinary skill in the art. *In re Robertson*, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). The Office has not established this feature, and the rejection must therefore fail.

For all of the foregoing reasons, then, the rejection of claims 1, 12 and 24-27 under 35 U.S.C. §102(b) over Burns or Deb is improper and not based upon any proper evidence of record in the instant case. Reconsideration and withdrawal of the rejection is thus earnestly solicited.

Claims 1 and 5 stand rejected under 35 U.S.C. §102(b) as unpatentable over Laube. In particular, the Office asserts that applicant's "comprising" language means that native enhancer sequences can be added to applicant's constructs that contain minimal promoters, and that Laube teach promoters with native enhancer sequences but still meet the requirements for applicant's claims. Office Action at pages 15-16. The Office then concludes "Laube anticipates the claims." Applicant respectfully disagrees.

All of applicant's claims include the express limitation that a minimal promoter sequence is used to drive expression of the attached antigen sequence. The term "minimal promoter" is clearly and unambiguously defined in the specification as only encompassing those promoters where the native enhancer sequence has been excised or otherwise removed. Accordingly, contrary to the Office's assertions, the minimal promoters recited in the claims must have the native enhancer sequence excised or otherwise removed, and the use of open-ended ("comprising") language does not allow for the re-inclusion of the native enhancer in the expression construct.

Accordingly, in order for Laube to anticipate, the promoters described therein must have had all native enhancer sequences excised or otherwise removed. Laube clearly fails to disclose such subject matter, and the rejection must therefore fail. Reconsideration and withdrawal of the rejection of claims 1 and 5 under 35 U.S.C. §102(b) over Laube is thus respectfully requested.

Claims 1-4, 7-8, 11-17, 20-23 and 25-27 stand rejected under 35 U.S.C. §102(b) as unpatentable over Fynan. In particular, the Office asserts that applicant's "comprising" language means that native enhancer sequences can be added back into applicant's constructs that contain minimal promoters, and that Fynan teach promoters that "contain a minimal promoter" and thus meet the requirements for applicant's claims. Office Action at page 17. The Office also asserts that the claims that contain the phrase "consisting essentially of" also read on non-minimal promoters since functional variants can contain insertions! Office Action at page 17. The Office then concludes "Fynan anticipates the claims." Applicant respectfully disagrees.

All of applicant's claims include the express limitation that a minimal promoter sequence is used to drive expression of the attached antigen sequence. The term "minimal promoter" is clearly and unambiguously defined in the specification as only encompassing those promoters where the native enhancer sequence has been excised or otherwise removed. Accordingly, contrary to the Office's assertions, the minimal promoters recited in the claims must have the native enhancer sequence excised or otherwise removed, and the use of open-ended ("comprising") language does not allow for the re-inclusion of the native enhancer in the expression construct.

With respect to the Office's assertion about applicant's claims to molecules "consisting essentially of" the minimal promoters somehow reading on full-length promoters (containing native enhancers), applicant is respectfully at a loss to understand the basis for this assertion. It is well established that a molecule "consisting essentially of" certain recited elements does not contain any additional operative elements. Accordingly, claims reciting minimal promoters "consisting essentially of" certain recited minimal promoter sequences cannot encompass promoters with native enhancer sequences. The Office's position defies both logic and established rules of claim construction.

Accordingly, in order for Fynan to anticipate, the promoters described therein must have had all native enhancer sequences excised or otherwise removed. Fynan clearly fails to disclose such subject matter, and the rejection must therefore fail. Reconsideration and withdrawal of the rejection of claims 1-4, 7-8, 11-17, 20-23 and 25-27 under 35 U.S.C. §102(b) over Fynan is respectfully requested.

Claims 1-3, 7, 12-14 and 25-27 stand rejected under 35 U.S.C. §102(e) as unpatentable over Hobart. The Office asserts "Hobart teaches preparation of a bicistronic eukaryotic expression vector comprising ... a tetracycline-controlled activator-responsive promoter," and that "an exemplary plasmid vector is VR1370 [containing] the -53 to +1 hCMV-IE gene TATA box (minimal promoter) and the 944 base hCMV-IE gene 5' untranslated region and intron A sequence." Office Action at page 18. The Office then concludes "Hobart anticipates the instant claimed invention." Applicant respectfully disagrees.

As stated by the Office, the VR1370 vector construct contains the CMV promoter along with all of the 944 base 5' untranslated sequences (that is, the sequences including the native CMV enhancer sequences). Accordingly, Hobart cannot possibly anticipate applicant's claims since it clearly does not disclose a minimal promoter. The rejection is thus improper, and reconsideration and withdrawal of the rejection of claims 1-3, 7, 12-14 and 25-27 under 35 U.S.C. §102(b) over is Hobart is respectfully requested.

The Rejection under 35 U.S.C. §103(a):

Claims 1-4, 7-8, 11, 15-17 and 20-23 stand rejected under 35 U.S.C. §103(a) as unpatentable over the combination Hobart in view of Johnston. More particularly, the Office asserts that Hobart teaches "an exemplary plasmid vector ... VR1370 [containing] the -53 to +1 hCMV-IE gene TATA box (minimal promoter) and the 944 base hCMV-IE gene 5' untranslated region and intron A sequence." Office Action at pages 19-20. The Office then asserts that Johnston "teaches that the regulatory sequences ... are generally

promoters which are operable in the target tissue cells, and that other regulatory elements which **may optionally** be incorporated intothe polynucleic acid sequence include **enhancers**" (Office Action at page 21, emphasis in original). The Office then concludes "it would have been obvious ... to use the bicistronic expression vector of Hobart in the form of a DNA coated carrier for genetic immunization ... as taught by Johnston.," and "therefore, the claimed invention as a whole was *prima facie* obvious." Applicant respectfully disagrees.

Section 2143 of the M.P.E.P. sets forth the following three basic requirements for *prima facie* obviousness: (1) there must be some suggestion or motivation to modify or combine the references; (2) there must be a reasonable expectation of success for the modification and/or combination; and (3) the prior art reference must teach or suggest all the claim limitations. When assessing these issues, (1) the claimed invention must be considered as a whole; (2) the references must be considered as a whole and must suggest the desirability of making the combination; (3) the references must be viewed without the benefit of impermissible hindsight; and (4) a reasonable expectation of success is the standard with which obviousness is determined. *Hodosh v. Block Drug Co., Inc.*, 229 USPQ 182, 187, n.5 (Fed. Cir. 1986). Applicant submits that the Office has failed to satisfy these criteria, and has thus failed to establish *prima facie* obviousness over its asserted combination.

As already discussed herein above in regard to the Section 102 rejections, both the Hobart and Johnston references fail to teach, disclose or even so much as suggest applicant's recited minimal promoters, much less the concept of providing minimal promoters. Accordingly, any conceivable combination of these references still fails to teach or suggest applicant's minimal promoter systems. Accordingly, applicant submits that the Office has failed to establish *prima facie* obviousness over it's proposed combination of Hobart and Johnston.

For these reasons, then, the rejection of claims 1-4, 7-8, 11, 15-17 and 20-23 under 35 U.S.C. §103(a) over Hobart in view of Johnston is improper. The Office's proposed combination fails to teach or suggest all of applicant's recited limitations. Without the requisite teaching or suggestion, there cannot have been a reasonable expectation for success. Accordingly, *prima facie* obviousness has not been established. Reconsideration and withdrawal of the rejection is thus earnestly solicited.

CONCLUSION

Applicant respectfully submits that the claims as now pending define an invention which complies with the requirements of 35 U.S.C. § 112 and which is novel and nonobvious over the art. Accordingly, allowance is believed to be in order and an early notification to that effect is earnestly solicited. Applicant further asks that, should the Examiner note any minor remaining issues that may be resolved with a telephone call, that the Examiner contact the undersigned in the UK at +44 1865 332 600.

Respectfully submitted,

Date: 7 October 2002

By: _____
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Printed Name: Thomas P. McCracken .

Signature

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

James T. FULLER

Serial No.: 09/421,778 Art Unit: 1636

Filing Date: 7 December 1994 Examiner: Q.Nguyen

Title: MINIMAL PROMOTERS AND USES THEREOF

PETITION FOR EXTENSION OF TIME

Commissioner for Patents
Washington, D.C. 20231

Sir:

The following extension of time is requested in order to file a response to the Office Action mailed 18 December 2002.

X Three months to 18 June 2003 . The extension fee is $930.00.

X Please charge the extension fee ($930.00) to Deposit Account 50-0828.

The Commissioner is hereby authorized to charge any fees under 37 CFR Sections 1.16 and 1.17 which may be required by this paper, or to credit any overpayment, to Deposit Account No. 50-0828.

Respectfully submitted,

Date: 18 June 2003

By:
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Claims 2-8, 11-14 and 27 have been amended as follows.

2. (Amended) [A] The method according to claim 1, wherein the construct is delivered directly into a subject.

3. (Amended) [A] The method according to claim 2, wherein the construct in delivered by injection, transdermal particle delivery, inhalation, topically, [orally,] intranasally or transmucosally.

4. (Amended) [A] The method according to claim 3, wherein the construct is delivered by needleless injection.

5. (Twice Amended) [A] The method according to claim 1, wherein the construct is delivered *ex vivo* into cells taken from a subject.

6. (Twice Amended) [A] The method according to claim [6] 5, wherein the subject is a human.

7. (Twice Amended) [A] The method according to claim 1, wherein the antigen is a full length protein.

8. (Amended) [A] The method according to claim 7, wherein the antigen is an antigen of a viral, bacterial, parasite or fungal pathogen.

11. (Amended) [A] The method according to claim 1, wherein the nucleic acid construct is coated onto carrier particles.

12. (Amended) [A] The method according to claim 1, wherein the nucleic acid construct is a DNA construct.

13. (Amended) [A] The method according to claim 1, wherein the minimal promoter sequence consists essentially of a human cytomegalovirus (hCMV) immediate early promoter sequence, a pseudorabies virus (PRV) early promoter region, a simian cytomegalovirus (sCMV) immediate early promoter sequence or a functional variant thereof.

14. (Amended) [A] The method according to claim 13, wherein the minimal promoter sequence consists essentially of the sequence spanning positions 0 to -118 of the hCMV immediate early promoter region or a functional variant of the said spanning sequence.

27. (Amended) [A] The vector according to claim 26 which is a plasmid.